

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office 'Address: COMMISSIONER OF PATENTS AND TRADEMARKS Washington, D.C. 20231 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26646

7590

04/22/2002

KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004 EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT CLASS-SUBCLASS

1774

428-690000

16

DATE MAILED: 04/22/2002

APPLICATION NO.

FILING DATE

FIRST NAMED INVENTOR

ATTORNEY DOCKET NO.

CONFIRMATION NO.

09/449,801 11/26/1999 STEPHEN R. FORREST 10644/50101 6720

TITLE OF INVENTION: ORGANIC PHOTOSENSITIVE OPTOELECTRONIC DEVICE WITH AN EXCITON BLOCKING LAYER

TOTAL CLAIMS	APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
24	nonprovisional	YES	\$640	\$0	\$640	07/22/2002

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED.</u> THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN <u>THREE MONTHS</u> FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. <u>THIS STATUTORY PERIOD CANNOT BE EXTENDED</u>. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

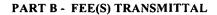
HOW TO REPLY TO THIS NOTICE:

- I. Review the SMALL ENTITY status shown above. If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:
- A. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.
- Applicant claims SMALL ENTITY status.
 See 37 CFR 1.27.
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- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.



Complete and mail this	form, together wit	h applicable	fee(s), to
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Box ISSUE FEE

Assistant Commissioner for Patents

Washington, D.C. 20231

MAILING INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

indicated unless correct maintenance fee notifica		herwise in Block 1, by (a	a) specifying a new co	orrespondence addre	ss; and/o	or (b) indicating a sepa	arate "FEE ADDRESS" for
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KENYON & I				or formar drawing,			i muning.
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							(Signature)
							(Date)
APPLICATION NO.	FILING DATE	. 1	FIRST NAMED INVEN	TOR	LATT	ORNEY DOCKET NO.	CONFIRMATION NO.
09/449,801	11/26/1999	<u> </u>	STEPHEN R. FORR		1	10644/50101	6720
TITLE OF INVENTION	N: ORGANIC PHOTOSI	ENSITIVE OPTOELECT	RONIC DEVICE WIT	H AN EXCITON B	LOCKIN	NG LAYER	
TOTAL CLAIMS	APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION	FEE	TOTAL FEE(S) DUE	DATE DUE
24	nonprovisional	YES	\$640	\$0		\$640	07/22/2002
	AMINER Y, MARIE ROSE	ART UNIT	CLASS-SUBCI 428-69000				
TAMINITZK	1, MARIE ROSE	1774	428-03000				
I. Change of correspor CFR 1.363). Use of PT	ndence address or indicated form(s) and Customer	tion of "Fee Address" (37 r Number are recommende	2. For printing	on the patent front p to 3 registered pa	page, li	st (I)	
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PLEASE NOTE: Unle	ess an assignee is identif	ied below, no assignee da being submitted under sep	ta will appear on the	patent. Inclusion of a	ssignee	data is only appropriat	e when an assignment has
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Please check the approp	riate assignee category o	r categories (will not be pr	rinted on the patent)	individual 🖸	corpor	ation or other private gr	oup entity government
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□ Publication Fee □ Payment by credit card						redit any overnavment to	
☐ Advance Order - #	of Copies	De	eposit Account Number	r	_(enclos	e an extra copy of this	redit any overpayment, to form).
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APPLICATION NO	ON NO. FILING DATE		FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/449,801 11/26/1999		11/26/1999	STEPHEN R. FORREST	10644/50101	6720	
26646	6646 7590 04/22/2002			EXAMINER		
KENYON & KENYON				YAMNITZKY, MARIE ROSE		
ONE BROADWAY NEW YORK, NY 10004 UNITED STATES				ART UNIT	PAPER NUMBER	
				1774		
			DA	TE MAILED: 04/22/2002		

Determination of Patent Term Extension under 35 U.S.C. 154 (b) (application filed after June 7, 1995 but prior to May 29, 2000)

The patent term extension is 0 days. Any patent to issue from the above identified application will include an indication of the 0 day extension on the front page.

If a continued prosecution application (CPA) was filed in the above-identified application, the filing date that determines patent term extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) system. (http://pair.uspto.gov)

A9-#16/B

	Application No.	Applicant(s)	
Mating of Allowahility	09/449,801	FORREST ET AL.	
Notice of Allowability	Examiner	Art Unit	
	Marie R. Yamnitzky	1774	
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT I of the Office or upon petition by the applicant. See 37 CFR 1.31	S (OR REMAINS) CLOSED in this apposition or other appropriate communication RIGHTS. This application is subject to	plication. If not included will be mailed in due course. THIS	
 This communication is responsive to Applicants' amendment of the allowed claim(s) is/are 1-24. The allowed claim(s) is/are 1-24. The drawings filed on are accepted by the Examinate. Acknowledgment is made of a claim for foreign priority under a) ☐ All b) ☐ Some* c) ☐ None of the: Certified copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the priority documents have a copies of the certified copies of the priority documents have a copies of the priority documents ha	ner. nder 35 U.S.C. § 119(a)-(d) or (f). ve been received. ve been received in Application No ocuments have been received in this under 35 U.S.C. § 119(e) (to a provisital application has been received.	 national stage application from the	
Applicant has THREE MONTHS FROM THE "MAILING DATE" below. Failure to timely comply will result in ABANDONMENT of	of this communication to file a reply co	omplying with the requirements noted NTH PERIOD IS NOT EXTENDABLE	
7. A SUBSTITUTE OATH OR DECLARATION must be sub INFORMAL PATENT APPLICATION (PTO-152) which gives rea	mitted. Note the attached EXAMINER ason(s) why the oath or declaration is	d'S AMENDMENT or NOTICE OF deficient.	
 8. ☐ CORRECTED DRAWINGS must be submitted. (a) ☐ including changes required by the Notice of Draftsper 1) ☐ hereto or 2) ☐ to Paper No. 11. (b) ☐ including changes required by the proposed drawing Examiner. (c) ☐ including changes required by the attached Examiner. Identifying indicia such as the application number (see 37 CFR) 	correction filed 18 January 2002, we'r's Amendment / Comment or in the 0	hich has been approved by the Office action of Paper No	
of each sheet. The drawings should be filed as a separate paper	or with a transmittal letter addressed to	the Official Draftsperson.	
9. DEPOSIT OF and/or INFORMATION about the depattached Examiner's comment regarding REQUIREMENT FOR	osit of BIOLOGICAL MATERIAL r THE DEPOSIT OF BIOLOGICAL MA	nust be submitted. Note the TERIAL.	
Attachment(s)			
 1⊠ Notice of References Cited (PTO-892) 3□ Notice of Draftperson's Patent Drawing Review (PTO-948) 5□ Information Disclosure Statements (PTO-1449), Paper No. 7□ Examiner's Comment Regarding Requirement for Deposit of Biological Material 	4⊠ Interview Summ 6⊠ Examiner's Ame	al Patent Application (PTO-152) ary (PTO-413), Paper No. <u>15</u> . indment/Comment ement of Reasons for Allowance	

B

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for the examiner's amendment to the claims was given in a telephone interview with Kevin Godlewski on 04/19/02.

The claims have been amended as follows:

Claim 25 has been cancelled.

The specification has been amended as follows in order to update the status of cited U.S. patent applications. These changes were not discussed with Mr. Godlewski.

Page 1, lines 1-3 have been deleted and replaced with the following text:

This is a continuation-in-part application of U.S. Patent Applications with Serial Numbers 09/136,342, 09/136,166, 09/136,377, 09/136,165 and 09/136,164, each filed on August 18, 1998, now U.S. Patent Numbers 6,352,777, 6,297,495, 6,278,055, 6,198,092 and 6,198,091, respectively.

Page 10, line 19: --, now abandoned-- has been inserted after "09/311,126".

Page 17, lines 6-7: "with Serial Numbers...09/136,164" has been deleted and replaced with --, now patented and having U.S. Patent Numbers 6,352,777, 6,297,495, 6,278,055, 6,198,092 and 6,198,091,--.

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Application/Control Number: 09/449,801

Art Unit: 1774

In the first full paragraph on page 30 (the replacement paragraph provided by applicants): "("'800 Application")" has been changed to --, now U.S. Patent No. 6,333,458,--.

Page 32, line 6: "the 50501 Application" has been changed to --U.S. Patent No. 6,333,458--.

The references made of record and not relied upon are considered pertinent to applicant's disclosure.

The four U.S. patents listed on the attached PTO-892 for which no copies are provided issued from copending applications previously disclosed by applicants and considered by the examiner (see the PTO-1449 considered 08/13/01).

The patent to Ito et al. (5,652,067) discloses the WF (eV) and LUMO (eV) for quinacridone and copper phthalocyanine (CuPc). See Tables 2 and 3. The examiner understands the WF value to be the same as or similar to the HOMO value for these two compounds. While this data supports the examiner's position set forth in Paper No. 11 that the bandgap of quinacridone is about 2.3 eV and is higher than the bandgap of copper phthalocyanine, the examiner withdraws her position that the differences between the bandgaps of these two compounds necessarily means that the quinacridone layer in Example 5 of the Yoshikawa patent (5,201,961) inherently functions as an exciton blocking layer. In particular, the examiner notes that the examples in the present specification utilize materials having a greater difference in bandgaps between the materials of the exciton blocking layer and the adjacent hole or electron transport layer than provided by Yoshikawa's Example 5.



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Art Unit: 1774

Page 4

In reconsideration of the teachings of the present specification as a whole, and lack of evidence to support the examiner's arguments regarding inherency as set forth in the prior art rejection based on the Yoshikawa patent and in the prior art rejection based on the Suzuki patent (5,350,459), the examiner withdraws the prior art rejections.

Claims 1-24 are allowed.

Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (703) 308-4413. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax numbers for Art Unit 1774 are (703) 872-9311 for official after final faxes and (703) 872-9310 or (703) 305-5408 for all other official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (703) 872-9041.)

MRY 04/19/02

> MARIE YAMNITZKY PRIMARY EXAMINER

Marie R. Gammitzky

1774

